THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

October 2002

Totally Tubular, Man

I Got Deviated

VMC Vertigo

approach

The Naval Safety Center's Aviation Magazine

October 2002 Volume 47 No. 10
On the Cover An HH-65 Dolphin helicopter hovers for a photo op. USCG photo by Robert Wyman
RDML Stephen Turcotte Commander, Naval Safety Center
Bill Mooberry Deputy Commander
Derek Nelson Head, Media Department
Naval Safety Center (757) 444-3520 (DSN 564)
Dial the following extensions any time during the greeting

Approach Staff

You can e-mail any staff member by using their first initial and last name @safetycenter.navy.mil (except as noted).

Jack Stewart Editor Ext. 7257
John W. Williams Illustrator Ext. 7252
Patricia Eaton Graphics, Design & Layout Ext. 7254
Allan Amen Graphics, Design & Layout Ext. 7248
Matthew J. Thomas Staff Photographer Ext. 7244
Ginger Rives Distribution (Magazines and Posters) Ext. 7256 vrives@safetycenter.navy.mil
Publications FAX (757) 444-6791
Col. Dave Kerrick, USMC Aviation Safety Programs Ext. 7225
Cdr. Buzz Bauers Aircraft Operations Division Ext. 7203 wbauers@safetycenter.navy.mil
Cdr. Mike Francis Aircraft Mishap Investigation Division Ext. 7236
Capt. James Fraser Aeromedical Division Ext. 7228

Mission Statement

Mishaps waste our time and resources. They take our Sailors, Marines and civilian employees away from their units and workplaces and put them in hospitals, wheelchairs and coffins. Mishaps ruin equipment and weapons. They diminish our readiness.

This magazine's goal is to help make sure that personnel can devote their time and energy to the mission, and that any losses are due to enemy action, not to our own errors, shortcuts or failure to manage risk.

We believe there is only one way to do any task: the way that follows the rules and takes precautions against hazards. Combat is hazardous enough; the time to learn to do a job right is before combat starts.

Approach is published monthly by Commander, Naval Safety Center, and is an authorized publication for members of the Department of Defense. Contents are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, or the U.S. Navy. Photos and artwork are representative and do not necessarily show the people or equipment discussed. We reserve the right to edit all manuscripts. Reference to commercial products does not imply Navy endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author. Approach is available for sale by the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Subscription price: $47 domestic, $65.80 foreign per year. Telephone credit card orders can be made 8 a.m. to 4 p.m. Eastern time at (922) 512-1800. Periodicals postage paid at Norfolk, Va., and additional mailing offices.

Postmaster: Send address changes to Approach, Code 73A,
Naval Safety Center, 375 A Street
Norfolk, VA 23511-4399

Send articles and letters to the address above, or via e-mail to the editor, jstewart@safetycenter.navy.mil.

Features

2 **Totally Tubular, Man**
By Ltjg. Dan Leary, USCG
The flight started out simply enough...

6 **I Got Deviated?**
By Lt. Richard Knapp and Lt. Caleb Siemon
Going flying with the wrong mindset is not a good idea.

12 **A Rough Day at Lemoore**
By Lt. Brian Beck
A hot day gets even hotter for this Hummer crew.

14 **VMC Vertigo**
By Lt. Edgar Rodriguez
Just what this crew needs: further tasking.

18 **Who Failed that Engine?**
By Lt. Barry L. Ritko
One of life's little pleasures: A JO giving a NATOPS check to a lieutenent commander.

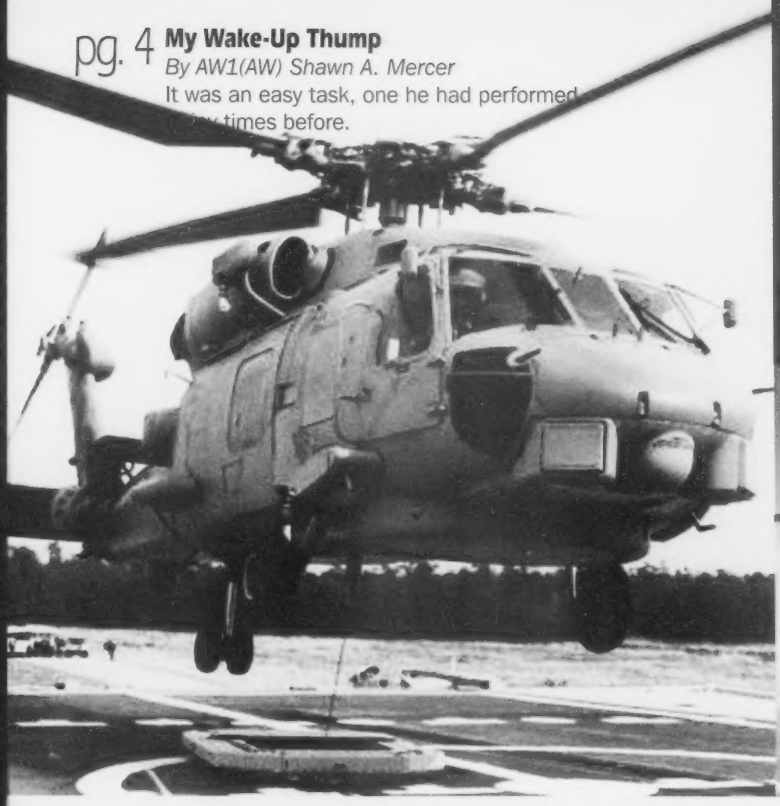
26 **Flight-Deck Fender Bender**
By Ltjg. Paul Till
Can a nugget actually call ops "routine?"

October Thanks

Thanks for helping with this issue...

LCdr. Glenn Jamison, VAW-112
Lt. John DiGiovacchino, VAW-113
LCdr. Willie Billingslea, VAQ-142
LCdr. Jeffrey Lincoln, HSL-42
Ltjg. Timothy Dinsmore, HSL-47
LCdr. Fred Lentz, HSL-44

pg. 4 **My Wake-Up Thump**
By AW1(AW) Shawn A. Mercer
It was an easy task, one he had performed [illegible] times before.



pg. 16 **Squawking Student Naval Aviator**
By Lt. Hugh Winkel
Learn the basics in the training command. Sounds like a good idea.

pg. 20 **There I Was...in the Congo**
A Hornet pilot 200 miles inside enemy territory doesn't want to deal with aircraft problems.

28 **Stuck on a Shock Absorber**
By Ltjg. Jeremy Vellon
You're not supposed to bleed on preflight.

30 **The Last Transmission**
By Cdr. Rick Erickson, MSC
There's a big hole in the ground. Why?

29 **Mishap-Free Milestones**

IBC **Classic Brownshoes in Action Comix**

BC **Ready Room Gouge**

Departments

8 **ORM Corner: I Ain't De-Goggling**
By LCdr. Christopher S. Robinson
Simulator training proves invaluable for this Prowler crew as they work through their emergency.

11 **From Our Files**

23 **Bravo Zulu**

25 **Our Website Has No Maze**

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION 01 October 2002
The Unitied States Postal Service requires all publications publish a statement of ownership, management and circulation.

Date	01 October 2002
Title of Publication — *Approach*	Publisher — U.S. Navy
USPS Publication No. — 1094-0405	Editor — Jack Stewart
Frequency of Issue — Monthly	Owner — United States Navy
	Total no. copies printed — 15,147
Location of Office of Publication	No. copies distributed — 14,897
Commander	No. copies not distributed — 250
Naval Safety Center	Total copies distributed and not
375 A Street	distributed — 15,147
Norfolk, VA 23511-4399	Issue Date for Circulation Data
	Above — October 2002

Visit us on-line at www.safetycenter.navy.mil

approach

The Naval Safety Center's Aviation Magazine

October 2002 **Volume 47 No. 10**
On the Cover An HH-65 Dolphin helicopter hovers for a photo op. USCG photo by Robert Wyman
RDML Stephen Turcotte **Commander, Naval Safety Center**
Bill Mooberry **Deputy Commander**
Derek Nelson **Head, Media Department**
Naval Safety Center (757) 444-3520 (DSN 564)
Dial the following extensions any time during the greeting

Approach Staff

You can e-mail any staff member by using their first initial and last name @safetycenter.navy.mil (except as noted).

Jack Stewart **Editor** Ext. 7257
John W. Williams **Illustrator** Ext. 7252
Patricia Eaton **Graphics, Design & Layout** Ext. 7254
Allan Amen **Graphics, Design & Layout** Ext. 7248
Matthew J. Thomas **Staff Photographer** Ext. 7244
Ginger Rives **Distribution (Magazines and Posters)** Ext. 7256 vrives@safetycenter.navy.mil
Publications FAX (757) 444-6791
Col. Dave Kerrick, USMC **Aviation Safety Programs** Ext. 7225
Cdr. Buzz Bauers **Aircraft Operations Division** Ext. 7203 wbauers@safetycenter.navy.mil
Cdr. Mike Francis **Aircraft Mishap Investigation Division** Ext. 7236
Capt. James Fraser **Aeromedical Division** Ext. 7228

Mission Statement

Mishaps waste our time and resources. They take our Sailors, Marines and civilian employees away from their units and workplaces and put them in hospitals, wheelchairs and coffins. Mishaps ruin equipment and weapons. They diminish our readiness.

This magazine's goal is to help make sure that personnel can devote their time and energy to the mission, and that any losses are due to enemy action, not to our own errors, shortcuts or failure to manage risk.

We believe there is only one way to do any task: the way that follows the rules and takes precautions against hazards. Combat is hazardous enough; the time to learn to do a job right is before combat starts.

Approach is published monthly by Commander, Naval Safety Center, and is an authorized publication for members of the Department of Defense. Contents are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, or the U.S. Navy. Photos and artwork are representative and do not necessarily show the people or equipment discussed. We reserve the right to edit all manuscripts. Reference to commercial products does not imply Navy endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission; please credit the magazine and author. Approach is available for sale by the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Subscription price: $47 domestic, $65.80 foreign per year. Telephone credit card orders can be made 8 a.m. to 4 p.m. Eastern time at (922) 512-1800. Periodicals postage paid at Norfolk, Va., and additional mailing offices.

Postmaster: Send address changes to Approach, Code 73A,
Naval Safety Center, 375 A Street
Norfolk, VA 23511-4399

Send articles and letters to the address above, or via e-mail to the editor, jstewart@safetycenter.navy.mil.

Features

2 **Totally Tubular, Man**
By Ltjg. Dan Leary, USCG
The flight started out simply enough...

6 **I Got Deviated?**
By Lt. Richard Knapp and Lt. Caleb Siemon
Going flying with the wrong mindset is not a good idea.

12 **A Rough Day at Lemoore**
By Lt. Brian Beck
A hot day gets even hotter for this Hummer crew.

14 **VMC Vertigo**
By Lt. Edgar Rodriguez
Just what this crew needs: further tasking.

18 **Who Failed that Engine?**
By Lt. Barry L. Ritko
One of life's little pleasures: A JO giving a NATOPS check to a lieutenent commander.

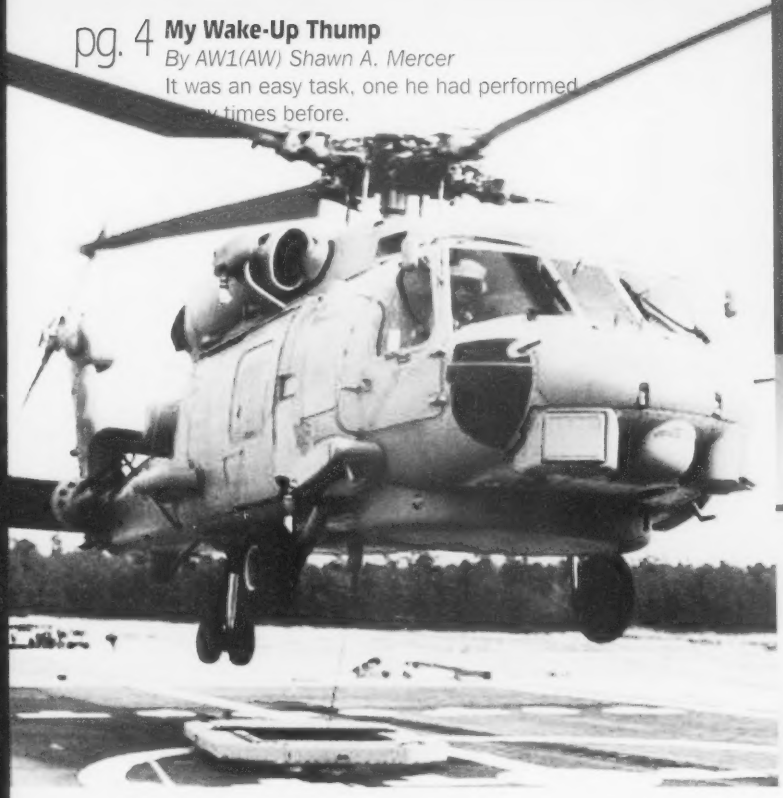
26 **Flight-Deck Fender Bender**
By Ltjg. Paul Till
Can a nugget actually call ops "routine?"

October Thanks

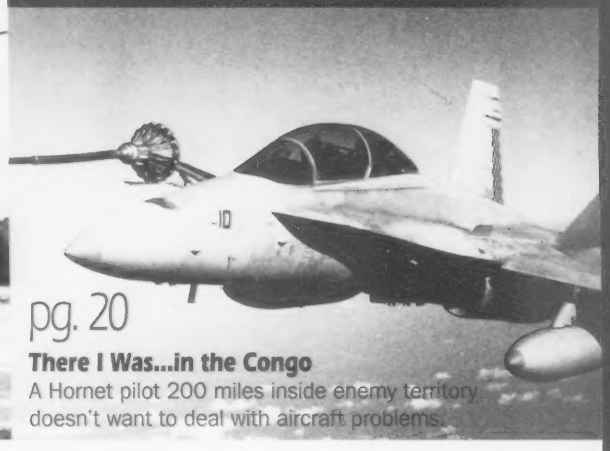
Thanks for helping with this issue...

LCdr. Glenn Jamison, VAW-112
Lt. John DiGiovacchino, VAW-113
LCdr. Willie Billingslea, VAQ-142
LCdr. Jeffrey Lincoln, HSL-42
Ltjg. Timothy Dinsmore, HSL-47
LCdr. Fred Lentz, HSL-44

pg. 4 **My Wake-Up Thump**
By AW1(AW) Shawn A. Mercer
It was an easy task, one he had performed [illegible] times before.



pg. 16 **Squawking Student Naval Aviator**
By Lt. Hugh Winkel
Learn the basics in the training command. Sounds like a good idea.



pg. 20 **There I Was...in the Congo**
A Hornet pilot 200 miles inside enemy territory doesn't want to deal with aircraft problems.

Departments

8 **ORM Corner: I Ain't De-Goggling**
By LCdr. Christopher S. Robinson
Simulator training proves invaluable for this Prowler crew as they work through their emergency.

11 **From Our Files**

23 **Bravo Zulu**

25 **Our Website Has No Maze**

28 **Stuck on a Shock Absorber**
By Ltjg. Jeremy Vellon
You're not supposed to bleed on preflight.

30 **The Last Transmission**
By Cdr. Rick Erickson, MSC
There's a big hole in the ground. Why?

29 **Mishap-Free Milestones**

IBC **Classic Brownshoes in Action Comix**

BC **Ready Room Gouge**

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION 01 October 2002
The Unitied States Postal Service requires all publications publish a statement of ownership, management and circulation.

Date	01 October 2002
Title of Publication — *Approach*	Publisher — U.S. Navy
USPS Publication No. — 1094-0405	Editor — Jack Stewart
Frequency of Issue — Monthly	Owner — United States Navy
	Total no. copies printed — 15,147
Location of Office of Publication	No. copies distributed — 14,897
Commander	No. copies not distributed — 250
Naval Safety Center	Total copies distributed and not
375 A Street	distributed — 15,147
Norfolk, VA 23511-4399	Issue Date for Circulation Data
	Above — October 2002

Visit us on-line at
www.safetycenter.navy.mil

Totally Tubular, Man

aka Strength of an Idea

By Ltjg. Dan Leary, USCG

It started simply enough: an NVG trainer with a sister helo and a local 41-foot, motor-life boat (MLB). This would be a great hop. The other pilot and I were HH-65 aircraft commanders, and the flight mechanic was upgrading his qualifications. We also had a salty flight-mechanic instructor with 18 years of experience on board. The weather was severe clear, with unlimited visibility under the goggles.

We would bang out night boat hoists, while the other aircraft did night rescue-swimmer work, then swap. After shooting a couple of night approaches to the shoreline, we started the boat work. The first two hoists went fine—underway hoists, direct to the well deck of the 41-footer.

As we began the third hoist, the basket hit the deck of the MLB, and the boat called for a waveoff. Since we were committed with the basket on deck, we waited for a ready-for-pickup signal, then hoisted the basket clear and backed off.

The MLB told us they saw something tubular fall from the helo. There isn't much room in the back of the Dolphin, so after a quick gear check, we concluded it must have been a chemlight. "Yeah, that's it, a chemlight," I said. Everyone

agreed. We completed the boat-hoist training and began rescue-swimmer work, while our sister ship hit the boat for some hoists.

The 30-minute flight to the air station was uneventful. We debriefed the flight with the aircrew and headed for the hangar. At that moment, I looked up and saw our tail-rotor-driveshaft cover was missing. This six-foot-long cover is indeed tubular. We called the boat station, and, fortunately, they recovered our missing cover.

Post-flight inspection revealed it had failed in flight. The three fasteners showed signs of wear. Was it material failure? I'd like to think so. The helicopter just had come out of a seven-day-maintenance inspection. Did we miss the discrepancy on preflight? Three people, myself included, had preflighted the aircraft without noticing if the driveshaft cover was loose. No one had done a physical, hands-on check. We instead opted for the strength of an idea (e.g., if it looks secured, it must be).

It's not mentioned in NATOPS, but I now physically check all covers on preflight. When the MLB said something tubular fell, we should have had our sister ship, or the MLB, check us with a spotlight to verify if anything was missing or out of place. We were only two minutes from a local airport. We could have diverted and checked the aircraft before resuming training.

We were focused on trying to bang out mins up front and complete the flight mechanic's check ride. We should have slowed down and reanalyzed the mission. As the saying goes, it is better to be on the ground, wishing you were in the air, than in the air, wishing you were on the ground.

Ltjg. Leary was an HH-65 aircraft commander with Coast Guard Air Station, Traverse City, Mich. He is currently stationed at Kodiak, AK.

At that moment, I looked up and saw our tail-rotor-driveshaft cover missing.

My Wak

By AW1(AW) Shawn A. Mercer

I'm here to tell you even a flyer of 12 years can make dumb mistakes. We've all done it; we've read the articles that make you cringe and make you think to yourself, "What a knucklehead that guy is!" We always take something away from our reading that may prevent us from killing ourselves, killing someone else, damaging an aircraft, or just looking stupid.

We were on our way home from an extended work-up period. It was my first time to sea in the LAMPS Mk-III helo, and, in many ways, I still was green to the helicopter community. Shipboard landings were the primary focus during the days immediately before our flyoff. It was the beginning of the month, and we wanted to maintain our currency as long as possible. We also wanted to make sure everyone received flight-deck pay for another month.

It seemed like we bounced endlessly on the back of our cruiser: up, down, up, down, over and over. Our after-takeoff and before-landing checks were modified because of multiple RA and free-deck landings. The only modification that applied to me was leaving the RAST probe in the down position during the evolutions. We just were doing laps in the pattern and bouncing. No harm done. Right?

The day finally came to fly off and head for "home sweet home." Time to go back to family and friends and share the experiences of shipboard life: how it feels to walk on walls and how to keep the fine shipboard chow from revisiting you unexpectedly. Many important things required our attention.

The takeoff from the boat was uneventful. I reported the crewman's after-takeoff checks complete and stared anxiously at the radarscope until I saw the familiar outline that defined home. The flight went well, aside from the junior pilot's dilemma as to which lucky lady got the first call when he was back in town. In fact, the entire flight back was filled with chatter regarding how we planned to fill our days before the long cruise. Unfortunately, the detachment maintenance officer felt he needed to inflict his ideas on us for prioritizing preparations for our pre-deployment readiness inspection. It's funny what becomes important to some, but we endured.

With our home field in sight and landing checks complete, tower cleared us to land on the parallel taxiway for the wash rack. The pilot set down the aircraft—softly—because of the weight we carried. Then it happened—there was a thump!

The maintenance chief and I glanced at each other, looking surprised, and simultaneously exclaimed, "What was that?" I immediately checked my equipment, looked up at the RAST panel, and discovered I was a knucklehead. I hadn't raised the RAST probe during my after-takeoff checklist. An hour late, I finally raised the probe without incident.

e-Up Thump

After shutdown, we inspected the aircraft and found no damage. That day, I joined the ranks of knuckleheads—some not as lucky as me. Those who are familiar with Seahawks know things could have been a lot worse. What if we had done a run-on landing? I get goose bumps just thinking about that very real scenario.

Checklists, checklists, checklists—make sure you comprehend each item's query and make sure you have complied with it. Sometimes we get so comfortable we gloss over the familiar words, and, every now and then, one of us gets bitten. Be meticulous.

AW1(AW) Mercer is a lead aircrewman-SAR with HSL-44 Det 6.

That day, I joined the ranks of knuckleheads—some not as lucky as me.

Photo by Cdr. Chris Buhlmann

I Got Deviated

By Lt. Richard Knapp and Lt. Caleb Siemon

I finally got to sit down and hack away at the stack of papers in the Div O inbox. Over the past two weeks of flying, the stack had grown higher than the monitor. I soon was told I had been scheduled for a midmorning FCF. I was unhappy, but I put it behind me, bottled up my frustration, compartmentalized like every aviator does and carried out the task at hand. Despite my initial lack of enthusiasm, we briefed with the detail and thoroughness the flight deserved and headed out.

The FCF was to be conducted within 10 miles of the field, so our fuel load of 15,400 pounds was 5,000 pounds more than needed.

Ground ops were uneventful, and our Prowler was soon orbiting over Smith Island.

The weather was clear, and a lot of VFR traffic transited our block during the check. Approach control continually gave traffic advisories, while we proceeded through the checklists. We conducted the gear and flaps-down part of the checklist first, to burn off the extra fuel, so we could do the emergency flaps and slats check at 180 knots. If everything went well, we would be complete in 20 minutes. Because we changed the order of the checks, we cycled the gear and flaps more times than if we had performed the steps in the written order.

The traffic calls were constant as we neared the last item. I repeatedly did clearing turns to find the traffic. We completed the last step of our checks by cleaning-up the flaps and slats electrically.

We told approach we were complete and requested the initial for the break. En route to the initial, at 3,000 feet and 250 knots, I had this nagging feeling something was not quite right with the aircraft. The controls were OK, and a cursory look at the instruments and indicators appeared fine, but there was a slight airframe noise. It was similar to the noise you hear when the aircraft is in a slight sideslip, or the rudder is out of trim.

We had the field in sight, descended, and turned inbound to the initial. Something again seemed out of the ordinary as we continued to the midfield break. We slowed to gear speed moments after the break. I reached for the handle to drop the gear and stared in disbelief, as I tried to figure out why the handle already was down. At that same moment, tower tells us, "Uhh…in the break…your gear is down!"

I reached for the handle to drop the gear and stared in disbelief . . .

As I completed the turn to downwind, my mind was reeling. How had this happened? It seemed impossible to concentrate on the next critical phase of flight: landing.

Everything from the break on was so sluggish. I did not fly my numbers around the approach turn. I couldn't put the event of 15 seconds ago behind me. Just to be cautious, I flared the landing and reviewed what to do if I had gear-related problems with the brakes or nosewheel steering. It was a long taxi to the line, and I don't think a single soul said a word the entire way.

I inspected the gear, looking for any obvious overspeed damage, and notified maintenance control of what had happened. Fortunately, nothing was wrong with the aircraft, but we had several bruised egos.

I reflected on the events of that day over the next few weeks. Mistakes can happen regardless of experience or ability; you just need the right conditions. Although I felt I had compartmentalized and never thought about personal or professional issues in the jet, my ability to carry out the mission was affected.

I shouldn't have flown the FCF. I came to work with the mindset there was no way I would be flying. As a result, I wasn't as sharp as I needed to be. Aviators operate on habit patterns, which are the cornerstone of how we safely operate aircraft. But, as I was harshly reminded, as soon as we deviate from normal routines, we lose the benefit of habit patterns to keep us out of trouble.

Flexibility is the key to success, but it also is the mother of all screw-ups. Be on your guard when the plan changes. When I scanned the instruments looking for something wrong with the jet, I should have seen the obvious indications the gear was down and locked. I only saw what I wanted to see: The gear was up.

Obviously, our aircrew coordination was lacking. I didn't say something might be wrong. My rightseater placed too much trust in my ability and didn't back me up on critical items during configuration changes.

Unexpected events may cause you to fixate on them. Don't underestimate this fixation because it may interfere with even the most basic procedures.

Lts. Knapp and Siemon fly with VAQ-142.

ORM Corner

I Ain't De-Goggling

By LCdr. Christopher S. Robinson

It was a cool, spring night in late October, and we were operating south of the equator. Four flights were on the schedule, all hot seats, and I was the HAC for the two middle sorties. Our mission was to locate and covertly monitor a fishing vessel suspected of carrying a large amount of contraband.

It was an overcast but moonlit night—good conditions for NVGs. I jumped into the cockpit as the purple guys refueled our SH-60B on the FFG flight deck. I strapped in and got my mind focused. I goggled up and was ready for a long night of flying.

We were only three weeks into a six-month cruise. Before deployment, I had accumulated a grand total of 12 hours of NVG time, the minimum to be qualified. The value of NVGs, as a tactical and safety-of-flight tool, became apparent after using them just those 12 hours. Even with my lack of experience, I found myself saying, "These things make night flying so much easier." I know my fellow LAMPS pilots would agree with me. But, as I found out on this mission, every flight on goggles takes careful planning and consideration.

After launch, we called "ops normal" with about 3+30 on gas. We refined the surface summary developed by the crew before us and correlated the current intelligence with our surface picture to rule out certain tracks from the potential contact of interest. We had been instructed to remain covert, so any visual identification of a contact would be done at a distance where the contact's crew could not see or hear our Seahawk. We estimated this distance to be one mile by flying run-ins on our mother ship and having bridge watchstanders say when they

ORM Corner

Please send your questions, comments or recommendations to Ted Wirginis or to Capt. Denis M. Faherty, Director Operational Risk Management.

Mr. Ted Wirginis' address is: Code 11, Naval Safety Center, 375 A St., Norfolk, VA 23511-4399. (757) 444-3520, ext. 7271 (DSN-564). E-mail: twirginis@safetycenter.navy.mil

Write Capt. Faherty at OPNAV Code N-09K, 2000 Navy Pentagon, Rm. 5E-816, Wasgington DC 20350-2000. (703) 614-8430, (DSN-224). E-mail: faherty.denis@hq.navy.mil

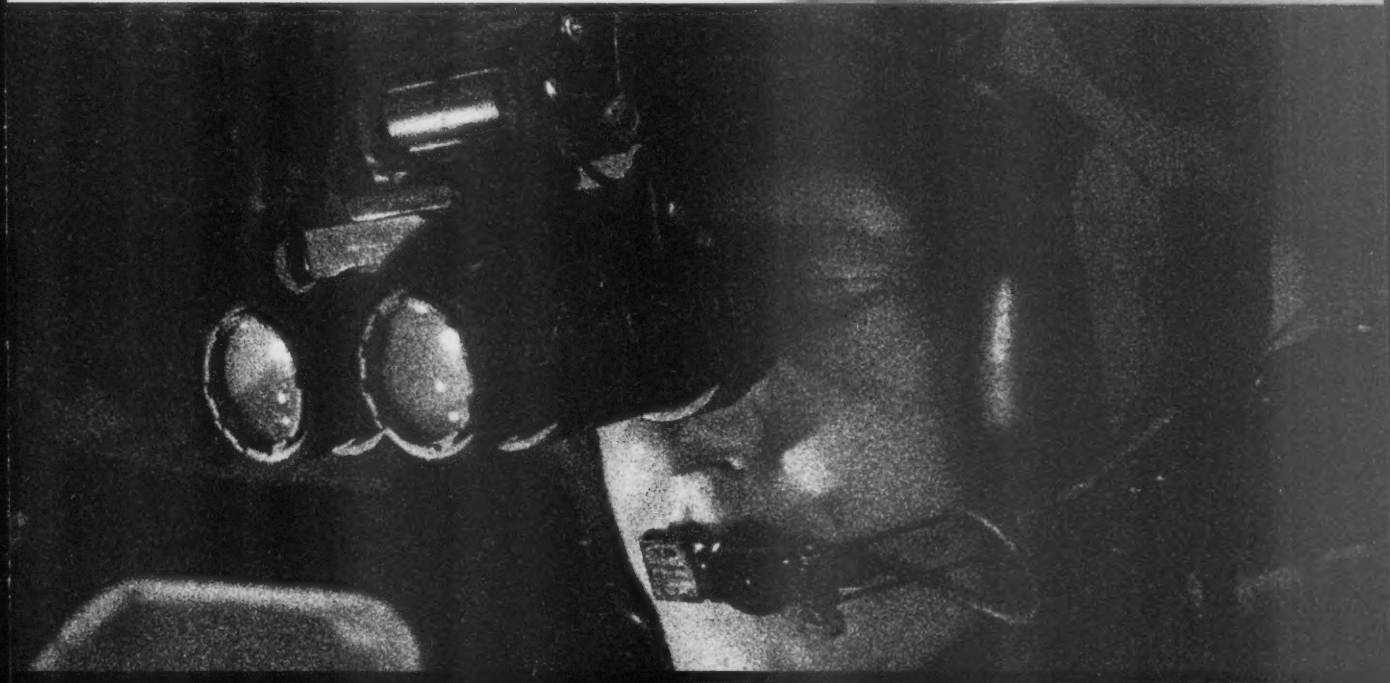


Photo by Matthew J. Thomas

heard or saw us. Naturally, we turned off all external lighting.

At one mile, we were able to distinguish gross features on most contacts with the NVGs, but it was not enough to positively identify the bad guy. However, we did narrow the possible suspects to two surface contacts. We continued to monitor them visually and on radar. Toward the end of my first bag of gas, the ASTAC relayed that "Alpha Bravo" had granted permission for us to overtly identify the two contacts of interest. We found our bad guy 15 minutes later. In another 15 minutes, we turned on deck for a hot pump and swap out of my copilot and sensor operator.

We relaunched with instructions to monitor our surface target of interest. As our ship closed the contact's position, we provided information on its course and speed, along with any activity we saw on the weather decks. Once mom was within a couple of miles, she began the query process over bridge-to-bridge radio. We monitored the conversation from the cockpit. During the questioning, we were instructed to get in close and describe any activity.

As we closed to within a couple hundred yards, the contact's forward cargo hold exploded in flames. Seconds later, there were 10 "fishermen" in the water and a 25-man life raft inflating beneath where we began a slow orbit. Within minutes, mom had a RHIB in the water with a rescue crew on board.

For the next 30 minutes, we monitored the situation, passing as much information to combat as we could. As the ship closed the position of the sinking fishing vessel, we marked debris with smoke floats. By the time the 100-foot boat slipped beneath the waves, it was 0300 local time. Moonset was at 0345. Our next recovery cycle was scheduled for 0500. The operating environment was about to change radically.

Once mom was on scene, the area where the fishing vessel had sunk became awash in white spotlights and other lights. With the RHIB in the water and 10 survivors to worry about, the captain did not want to lose site of anything in the darkness. The moon rapidly vanished. Our nice, high-light evening was turning into an extremely low-light environment, given the thick overcast layer that still existed.

So, there I was, going on my seventh straight hour on goggles. The conditions were low light, with no natural visible horizon off goggles. Home plate floated in a bloom of high-intensity-white spotlights. It was 0445 in the morning, and I had 45 minutes until I was at minimum fuel. The ASTAC told me to come in unaided, since the captain needed to keep the deck and spotlights on.

I thought about my first NVG RAST-landing qualification, when the instructor told me about only the time he had to de-goggle for a shipboard approach. He waved off three times before he finally flew an approach safe enough to transition for landing. I factored in his story with the minimum time I would need to adjust to being off goggles. We were tight on gas.

So, in response to the ASTAC's direction, I politely—well, maybe not so politely—told him, "I ain't de-goggling." I explained why I thought going unaided was a bad idea. He explained the captain's concerns about going dark when he had a boat in the water and a debris field in the general vicinity.

Our nice, high-light evening was turning into an extremely low-light environment . . .

I held firm, since I believed it was more risky for me to push and do an unaided recovery than for the ship to go lights-out while I landed. I had been on goggles for almost seven hours; the horizon barely was visible when aided. When I looked under my goggles, all I saw was blackness and no horizon. As a result, I thought I would need 20 to 30 minutes to adjust to the unaided environment. The captain agreed, and 10 minutes later, we made an uneventful NVG-aided landing and passed the aircraft to the next crew.

I debriefed in the combat information center and spoke to the captain about what had happened on the last recovery. During this conversation, I realized I had not told him of several procedures for NVG operations, such as the minimum time needed to transition from goggles to unaided. If I had thought through the mission more carefully, I would have realized that during counter-drug operations, a ship can go from running dark and being covert to shining spotlights while doing small-boat operations and conducting a rescue in the space of several minutes. The former mode of operation is ideal for NVGs, while the latter favors unaided operations.

From an ORM perspective, I looked at this mission as an example of the relationship that exists between applying ORM during planning and applying it during real-time decision-making, or "ORM on the fly." At the end of the mission, my crew and I decided de-goggling for the next recovery would add too much risk. We would not be acclimated to unaided flight before we put ourselves in a low-fuel situation. This was a good decision, based on "ORM on the fly." However, if we had been more detailed during preflight risk assessment and taken a broader look at the mission—not just the aircraft and crew—we may have decided a high probability existed for night small-boat operations. We would have discussed the issue of de-goggling.

The captain was forced to go lights out and temporarily lose visual contact with his RHIB, an uncomfortable situation under the circumstances, because we were not prepared to fly unaided. Poor risk management during planning forced my crew to apply "real time" ORM.

We must strive to include all players in the ORM process, especially when flying around the boat. Every evolution on board a ship, from engineering drills to small-boat operations to tactical maneuvering, adds risk to flight operations. The more inclusive we make the ORM process, the more effective it will be.

LCdr. Robinson flies with HSL-42 Det 10 on board USS *Stephen W. Groves* (FFG 29).

From Our Files . . .

Attempted Bailout

9-09-24-3 9-24-59 Flight Hazard AD-6

LTJG N. I. Finkelman No injury

The night was extremely & unusually dark, without a horizon & cumulus clouds which could not be seen were present. These conditions made visual flying treacherous. The majority of flying was done under instruments; however, visual attitudes was used frequently. The pilot was relatively inexperienced in actual flying.

The pilot experienced a form of fascination which was followed by true "vertigo" at low altitudes. During this period he was incapable of controlling his aircraft. He attempted to bailout while highly excited. He held the parachute D-ring in his hands, crouched in the seat, & then attempted to exit from the cockpit. When he entered the windblast his right arm was violently yirked back & the D-ring was pulled. The pilot chute streamed along the canopy. Fearing that the chute was entangled the pilot sat back down & regained control of the a/c. With plane under control he gathered in his chute, sat on it & closed the canopy.

He experienced "vertigo" a second time. He promptly went on instruments & was able to control the airplane satisfactorily.

By Lt. Brian Beck

A Rough Day at Lemoore

We were flying Ghost 600 from Point Mugu to Lemoore for an out-and-in. It was a hot day as we headed to the initial for a break to 13L. I thought we were flying a little slow for a master jet base, so we stood on the power levers. That's where things started to go wrong.

About the time I was to break, we heard a loud noise. The Hawkeye shuddered, as the nose drifted right. Our operations officer, sitting in the CICO seat, immediately said we had a fire on the right engine. As my copilot looked to confirm the fire, I pulled the T-handle

E-2 photo by Matthew J. Thomas
Photo composite

and pushed the fire-extinguisher button. My copilot declared an emergency over the radio and requested an arrested landing. We confirmed the starboard prop was feathered fully and the fire was out.

We finished the memory-checklist items, and I started a turn to set up a left downwind for 13L, figuring that's where tower would send us. I was wrong. The tower cleared us for a right turn to enter the right downwind for runway 13R.

Controllability wasn't yet much of an issue, since we had feathered the prop at a high airspeed. But, as we slowed to the downwind gear speed and finished the single-engine procedures, the plane became a handful. Feeling comfortable that we had enough single-engine power and knowing we had almost a full bag of gas, I dropped the gear, flaps and hook and started the landing checks. I then realized I rapidly was running out of rudder authority. What next? My copilot calmly pointed out I still had six degrees of rudder authority selected—an oversight I corrected by selecting 20 degrees on the max-rudder switch. How had I missed that?

With that problem fixed and the landing checks completed, I started our approach turn. We flew around the turn toward the 90, but something didn't seem right. My radalt showed 800 feet, and my altimeter was swinging through the 500; we seemed low. My copilot reported we were approaching 200 feet AGL—field elevation was over 200 feet MSL.

We rolled out on short final, and I went to full power and slowly arrested the descent. We set down 800 feet before the arresting gear, 300 feet short of target. I maintained a nose-up attitude until we were in the wire. Once stopped, we shut down and quickly cleared the aircraft, in case the fire flared up again.

Once the plane was declared safe, we found oil covering the starboard nacelle. The engine had leaked oil into the compressor section and the buildup eventually caused a compressor stall and, subsequently, a five-foot flame out the tailpipe. Because the maintainers couldn't arrive until the next day, we began a six-hour, rental-car ride home. We had plenty of time to digest all that had happened.

So what did I learn? Where do I begin? Though not specifically stated in NATOPS, we briefed any engine shutdowns past the hold-short would be performed with both pilots' concurrence. What would have happened if I had T-handled the wrong engine?

Don't make assumptions. In my haste to get on deck, I started turning to the left when tower had different plans for me.

Once you start a checklist, complete it. If I had selected 20-degrees rudder when I was supposed to, my copilot wouldn't have had to remind me I was approaching an emergency.

If I had been sharp on my systems knowledge, I would have known with an engine secured, the radalt loses power because of the generator bus tie.

Finally, I wasn't at home field. Lemoore's field elevation is different than Mugu's. If I had kept this difference in mind, I wouldn't have driven dangerously low at the 90. I fortunately avoided putting an $80-million plane into the deck, just short of the runway, with four of my squadronmates aboard. The excellent crew coordination and backup by my copilot and crew saved the day.

Looking back, I realize my actions were driven by my rush to get on deck. The engine was secured, the fire was out, and the plane still flew. If I had taken my time and been more methodical, I wouldn't have made so many mistakes. Emergency procedures should be executed in a timely manner, consistent with the nature of the emergency. Don't sacrifice proper execution and crew coordination for speed.

Lt. Beck flies with VAW-112.

VMC Vertigo

By Lt. Edgar Rodriguez

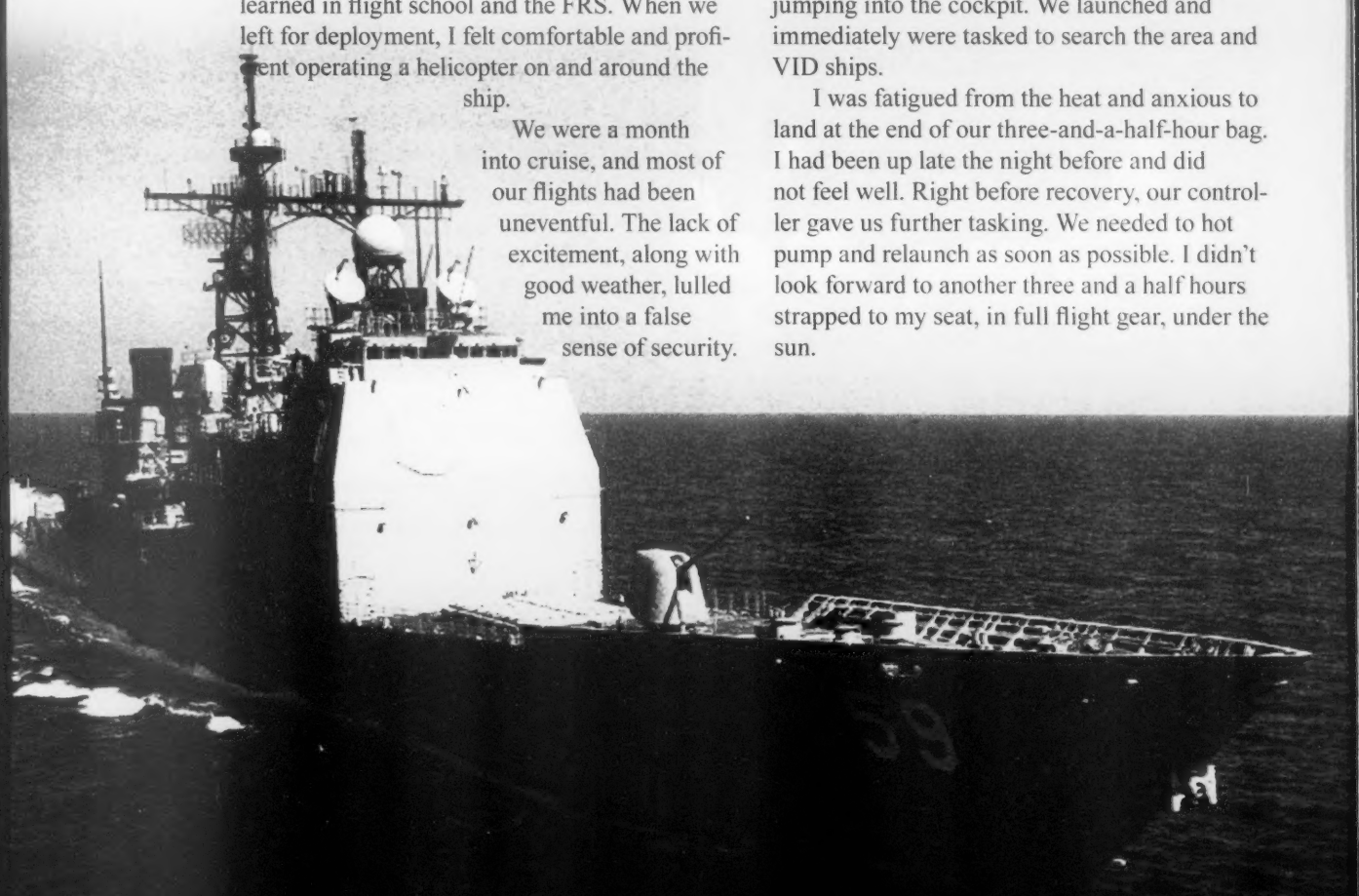
As is often the case for nuggets, I got a crash course in shipboard and Gulf ops during week-one ops and a hectic COMPTUEX and JTFEX. I was on my first WestPac as an H2P in the LAMPS Mk-III Seahawk. I had been in the squadron for a year and finally got to practice what I had learned in flight school and the FRS. When we left for deployment, I felt comfortable and proficient operating a helicopter on and around the ship.

We were a month into cruise, and most of our flights had been uneventful. The lack of excitement, along with good weather, lulled me into a false sense of security.

The morning started with an early CIC brief, followed by a weather brief. Like most days, the skies were clear, and the sea state was low. It appeared to be another standard day of deployed operations.

After finishing the preflight, I reviewed the shipboard and emergency procedures before jumping into the cockpit. We launched and immediately were tasked to search the area and VID ships.

I was fatigued from the heat and anxious to land at the end of our three-and-a-half-hour bag. I had been up late the night before and did not feel well. Right before recovery, our controller gave us further tasking. We needed to hot pump and relaunch as soon as possible. I didn't look forward to another three and a half hours strapped to my seat, in full flight gear, under the sun.



It was when my eyes went from the rolling deck to the steady horizon that I felt vertigo come on strong.

On the approach, I noticed the sea state had picked up, and the ship was taking on five-to-six-degree rolls. As I hovered over the flight deck, I felt a bit of the leans and started chasing the ship, instead of focusing on the horizon. After a tour of the deck, I managed to set down the helo in the RSD and relaxed for a few minutes while we fueled.

I felt poorly and considered telling the HAC I was not up to flying another bag but decided to continue the flight. I did not want him to think I wasn't pulling my fair share. We finished fueling and were ready to launch. Our numbers were updated and our PC made his final walk-around. While we were on deck, the ship had altered its course, and the new winds meant I had the takeoff. We called for amber deck, and off came the chocks and chains. I pulled up into a hover as the ship began taking on heavy rolls. My eyes focused on the superstructure. Although I again felt a bit of the leans, I still thought I was OK to continue. It was when my eyes went from the rolling deck to the steady horizon that I felt vertigo come on strong.

I made my power pull into the wind for takeoff and found myself excessively nose low, with an increasing angle of bank. We were less than 100 feet above the water—I still said nothing. My HAC saw what was happening, and he immediately challenged me. When I did not respond, he took the controls and flew us out of a bad situation.

I could have done several things to prevent the situation from going as far as it did. I should have used the HAC instead of cutting him out of the loop. I didn't take advantage of crew coordination. At the first sign of vertigo, I should have passed the controls to him. You rarely have enough time or altitude to allow a lengthy discourse on flying oneself out of the leans.

I didn't trust my instruments. I looked down at my attitude gyro and saw wings level, but I could have sworn the helo was in a right angle-of-bank turn. I even tried to compensate.

I thought about ORM. I had not slept well the night before and didn't feel well after the first hop. I should have told the HAC of my condition. He could have decided to continue the flight or to take the controls and get us off the deck.

Don't count on good weather and routine tasking. I lulled myself into a false sense of security after flying the same mission for the past five days under VMC conditions. Vertigo doesn't happen only in the clouds under turbulent conditions. It also can happen on a clear, sunny day. Had my HAC not been there to back me up, I would have gone for a swim that day.

Lt. Rodriguez flies with HSL-47 Det 5, on board USS *Princeton*.

Squawking Student Naval Aviator

By Lt. Hugh Winkel

It was a crisp night in January, with a beautiful moon over Kingsville, Texas. My class was preparing to walk for one of our last night field-carrier-landing-practice (FCLP) periods before doing the real thing at the boat. Just before walking, somebody mentioned something about fog. I didn't think too much of it because I figured the fog would be workable, or, worst case, we would cancel at the hold short.

Man-up was uneventful, and I could see the fog. Even though the airfield was clear and a million, I could see a wall a couple of miles off base. Our flight of six T-45s marshaled, taxied and checked in at the hold short. The fog bank looked to be parallel with the runway but still a mile or two away. Tower cleared us to switch paddles and to launch in order. After watching Dash 1 through 3 roll, I ran-up quickly and was on the roll.

As soon as I released brakes, a conversation started between Dash 1 and paddles. Dash 1 recommended cancelling because the downwind was unworkable. The fog bank was about 1,500 feet high and quickly moving toward the field.

As I rotated, I realized we would be cancelled. I thought, "No problem; I'll just keep Dash 3 in sight and follow him around for a full stop."

That's when the "fun" started. Paddles cancelled the event and recommended picking up a ground-controlled approach (GCA) because the fog already had started to obscure the left runway. Approach was overwhelmed by student naval aviators checking in, out of order, looking for a GCA pickup. I stuck to my game plan. I followed Dash 3, and switched to approach control on the deep-high downwind. Approach started to sort out the aircraft by assigning squawks in order. Because it was taking a while for approach to acquire radar contact, I decided to help. Being the student with global situational awareness, I figured out my squawk and started an orbit away from the field at 3,000 feet. I was going to get out of the way, squawk the appropriate code, and wait for approach to catch a breath.

Safely established in a right-hand turn and clear on top of the fog bank, I felt smug listening to approach pick up other aircraft for vectors. All I had to do now was squawk.

I looked down at the right-side console and saw the Mode 3 backlighting was burned out. I grabbed my flashlight and started wrestling with the two center push buttons. They were sticking, and I had to pry them loose with my fingernails every time I advanced a number.

Suddenly, it dawned on me: Nobody was flying my plane. When my head snapped up, I was IMC, 45-degrees AOB, and descending through 800 feet. I simultaneously leveled the wings, went to MRT, and pulled up. It seemed like an eternity (probably 10 seconds) before I was safe on top. A few moments later, approach grabbed me for vectors, and I flew an uneventful ILS to the right. The fog had obscured only the left runway.

If you are a problem solver, sometimes you can be your own worst enemy. Why would anybody in their right mind stop flying an aircraft, twist their body around, and jam their head down behind them to fiddle with a piece of gear? I don't know, but I did it.

Now, I always fly the aircraft, then navigate, then communicate. If something unusual comes up, as it always does, it takes a back seat to the big three. I can't solve problems as quickly while concentrating on flying first, but it sure beats a smoking hole in a farmer's field.

Lt. Winkel currently flies with VAW-113.

When my head snapped up, I was IMC, 45-degrees AOB, and descending through 800 feet.

Who Failed that Engine?

By Lt. Barry L. Ritko

I was near the end of my first tour and serving as the squadron NATOPS instructor. After giving a couple of checkrides, my chance came to win one back for the JOPA. A senior department head needed an ANI annual checkride, and I was the man to bring him some pain.

The NATOPS check started with numerous simulated emergencies in our MH-53E en route to Felker airfield, where we would do the fam items. The emergency-procedures portion of the flight was completed without incident, and we entered the local bounce pattern on runway 32. The winds were light to calm, and the pattern was all ours.

We completed the normal basic-airwork checks, such as the run-on and no-hover landings, servos off, and other required items. I then checked our operational weight and confirmed we were safe for the practice autorotations.

We received clearance from tower and climbed to 1,000 feet AGL. After several laps around the pattern, we had our fill of practice autos but decided to do one more each before calling it a day. With the checkride complete, I gave the controls to my copilot, and he leveled off at 1,000 feet AGL.

It happened fast. As soon as we leveled off, I felt a little thump in the airframe and saw the No. 2 engine torque drop to zero. I thought to myself, "Hey, I didn't initiate that emergency."

My scan moved to the gas-turbine gauge, and I saw it rising quickly. Immediately, I said, "The No. 2 engine has failed."

Next, the overheat light on the No. 2 engine came on as advertised. This light indicates the engine nearly is on fire, and the temperature at the aft-engine sensor is about 575 F. My copilot transitioned the aircraft to dual-engine flight parameters and descended to land.

Photo by Matthew J. Thomas

We continued our descent to land as I called tower and reported a failed engine.

I grabbed the speed-control lever on the No. 2 engine, asked my copilot to confirm (which he did) and secured the engine. We continued our descent to land as I called tower and reported a failed engine. I said we required immediate landing and assistance on touchdown. Tower cleared us to land.

Our crew scanned the cabin for secondaries, such as fire or engine debris flying in the cabin. The crew said all looked good. While they continued their scan, I pulled the fire T-handle on the No. 2 engine, which armed the fire bottles for discharge and secured the engine-fuel-selector lever. Once the engine was off, I scanned the gauges to make sure the engine indeed was off and no other problems were present. My copilot rolled on final and set his landing attitude, while I ran up power on the remaining two engines. He executed a smooth-running landing to minimize the required power. It was a nice landing.

Once we came to a stop, we rescanned the No. 2 engine to make sure everything was secure. The engine showed a normal cooling trend, with no secondaries. I talked with tower and got approval to back-taxi and shut down on the tarmac. The shutdown went without incident, and we took a deep breath, congratulated each other on a safe landing, and checked for damage.

Postflight inspection was frustrating; nothing could be found wrong with the No. 2 engine. The quality-assurance reps went over it with a fine-tooth comb but couldn't find any discrepancies. An FCF crew tested the engine but couldn't locate a problem. The engine was tested and operated as advertised.

I don't know what caused the No. 2 engine to fail. At the time of the emergency, my concern was a possible fire, the safety of my crew, and getting the aircraft on deck. My copilot and I knew we had plenty of power to land the aircraft with the remaining two engines. Having an emergency wasn't on my top-10 list of things to do; however, giving an O-4 a hard time on his NATOPS checkride was.

Our aircrew coordination was excellent within the crew, and we all were on the same page the instant the emergency happened. It was our first engine failure. We won't complain if we don't see another one in our careers.

Lt. Ritko flew with HM-14.

There I Was... in the Congo

The night mission in support of a U.S. Army Special Forces A-Team south of Qandahar Airport went like most missions we had flown the previous two months, albeit a little more interesting. We hit Al Qaeda and Taliban targets at night in a final push against the Taliban stronghold near the Qandahar airport. It wasn't exactly a 1+30 night bomb-smoke mission.

A series of elements, including our own, were tasked to destroy buildings that the ground FAC said were occupied by enemy forces. To keep the night more interesting, we saw random bursts of anti-aircraft artillery and small arms come at us from various positions around the airport. While we were confident the surface fire was not a threat, it did raise our adrenaline level. Since any surface fire, no matter how ineffective, was highly unusual, the mission already was more memorable than most. It looked like it would be a good story to banter about over mid-rats. I didn't realize how much higher my adrenaline level could go.

We had launched before midnight as a section from the Operation Enduring Freedom CVOAs and headed north, through Pakistan, to hit our front-side USAF heavy tanker. The weather wasn't terrible, but it wasn't good, either. We were occasionally in and out of the clouds, as we rendezvoused on the tanker. Tonight, a small consolation was that the tanker was a centerline drogue KC-10A, so there wouldn't be any "dancin' with the maiden" in the clouds.

After completing our front-side tanking, we headed to a contact point and switched to ground FAC. A section of Tomcats were servicing targets near the airport, so we climbed and held over the target area to waiting our turn to employ our weapons. We got the general target descriptions from the ground FAC and worked into a racetrack pattern with the Tomcats so we could expend our weapons in the shortest time. While we had enough gas at the time, the distances involved with the campaign required quite a bit of time sweating fuel. After three times around the racetrack, I guided my last weapon to hit a building and came around in a left turn, on goggles, to pick up my wingman as he completed his last run.

My wingman guided his last weapon and quickly picked up a visual of me as I came around in an arcing turn north of him. He just had called visual, and I was switching from the ground FAC frequency to the command-and-control net when I heard the dreaded, "Engine right,

Photo by Cpl. Kurt Fredrickson.

engine right," aural caution. I looked down to the DDI and discovered an R AMAD PR caution.

The first thing that occurred to me was, "Oh, great. I really needed this." Before I saw the caution, I had heard the warning and had brought the right throttle to idle. The caution went away on the DDI for about two seconds and then came back on. I said something to my wingman to indicate I had an engine problem.

Simultaneously, I tried to dig out my PCL from where it was buried in my helmet bag with CamelBaks, crackers, piddle packs, evasion charts, and NVG cases. The PCL confirmed what I suspected about the caution: I needed to secure the right generator, and, if there was more than 30 minutes before landing, I needed to secure the right engine. NATOPS directs this action because operations longer than 30 minutes will lead to an AMAD fire. Since I was more than 500 miles from the ship or nearest divert, I had much more than 30 minutes before landing. I didn't know how long the AMAD was going to stay together, so I needed to get gas and get out of country. I had less than 6,000 pounds of gas and still was more than 200 miles inside Afghanistan.

With a number of different elements in country, more than the usual amount of comm was on the AWACS frequency. I tried several times to get their attention. Finally, I came up and said, "Look, I've got a motor coming apart on me. I need a tanker, and I need to get out of country."

That phrase got attention. The AWACS identified the closest available tanker—thankfully, it was another KC-10—and gave me a vector. I switched my wingman to the tanker's boom frequency to coordinate our vectors and to expedite the join-up. I told him of my intention to get the motor secured within 30 minutes. My logic was if NATOPS said to leave it running if landing within 30 minutes, I could leave it turning that long to get gas. I didn't think I could stay in the basket of a heavy tanker at high altitude with only one engine turning. I planned to use the 30 minutes of allocated engine-run time with the caution to get gas and leave hostile territory.

We picked up radar SA to the tanker at the location passed by the AWACS, and dialed up his air-to-air TACAN. With only one generator left online, I had to secure the radar, but I wanted to wait until the joinup with my tanker. I identified the target as a KC-10 and asked him to turn to

the south, toward Pakistan, as we joined. He said he was heading south. My target, however, still tracked north, five miles away from us. I could see the KC-10 silhouette on the goggles.

AWACS asked me which tanker I wanted to join. Alarms started going off when I looked to see that the air-to-air TACAN showed almost 20 miles of separation. I had locked up the wrong tanker. The one I had locked had passed his fuel into the tanker I was directed to join, because his Navy drogue had failed. I had heard a discussion on the frequency about a consolidation between the two KC-10s after our front-side tanking but didn't remember it until now. They had been separating from each other when I got radar SA, and I tracked the wrong one. I realized my mistake and asked AWACS for another vector to my tanker, then turned back to the south. I asked the tanker to do a 360 to help us join.

Once we were joined, I asked the KC-10 to slow as much as feasible. Based upon their weight, they could make about 220 knots. As I approached the basket, almost 25 minutes had passed since the caution had first appeared. The right engine was at idle for almost all of that time. I extended the probe and plugged into the basket. I tried tanking with the left engine at military and the right throttle off the idle stops as required. I really couldn't stay in the basket with that plan, so we asked the tanker to descend to 17,000 feet. I wanted to see if my jet would perform better at that altitude.

At this point, we were almost in Pakistan and not concerned with the surface-to-air threat. Once we descended, I was able to stay in the basket with almost no power on the right. I topped off, backed out of the basket, and secured the right engine. It had been just over 30 minutes since we had come off target, and I had had the caution.

As my wingman topped-off, I started crunching fuel figures to see if we could make it home without more fuel. We coordinated with the E-2C, running the picture in the south, to recover one cycle early and figured we wouldn't need more gas. I had left my probe extended when I shut down the right engine, in case more gas was needed. With the right motor secured, I would not have the hyd 2 system that normally extends the fuel probe. Rather than worry about emergency extending my fuel probe if I needed to refuel again, I decided to leave it extended.

Fuel was not transferring out of the external tanks. It finally dawned on me that the external fuel couldn't transfer because the tanks were depressurized with the probe extended. I cranked the right engine for a few seconds just to retract the probe so I could transfer my external fuel. I would not need to tank again before the recovery. (After looking at the NATOPS Manual when we got back, I discovered I could have transferred my external fuel with the IFR probe extended and the right engine secured, if I had selected ORIDE on the external-fuel-tank control panel. This option did not occur to us.)

An hour later, I restarted the right engine at six miles and made an uneventful recovery aboard the ship. An O-ring on the right engine AMAD gearbox had failed, causing it to lose 108 of the 114 ounces of oil. Not more than a few minutes of flight time were left on the right engine before an AMAD fire likely would have occurred. The 30 minutes of flying time NATOPS prescribes turned out to be good gouge.

While not really deviating from NATOPS, we tried to apply some of that "sound judgment …may require modification of the procedures" line from the preface of the manual. Trying to understand the "why" behind several of the emergency procedures enabled us to come up with a game plan for solving the problem.

We normally don't have this much time to spend dealing with emergencies. Most of us think about knocking off the tactical problem and coming home if an emergency occurs. At worst, perhaps, we consider having to coordinate for a pull forward from the ship. Being 500 miles from home plate and 200 miles inside enemy territory changed the equation a little.

Talking through the problem with my wingman, leveraging the information in the PCL and our systems knowledge, and using the minimal amount of remaining brain bites enabled us to get the jet safely out of bad-guy territory and back on deck.

Author's name withheld.

BRAVO Zulu

The crew of Sun King 601 were preparing for deployment by conducting air-intercept-control training at NAS Fallon. The crew included: Ltjg. Jason Clendaniel, pilot, Lt. Corey Johnston, copilot and aircraft commander, LCdr. Brian Groff, combat-information-center officer, Lt. Chan Barry, aircraft-control officer and mission commander, and Ltjg. Jon Shepard, radar officer.

During climbout, the crew was unable to trim the rudder. While the crew was troubleshooting, the rudder-trim actuator failed, resulting in rudder trim completely running away to the right. Both pilots had to input left rudder to maintain directional control. The crew elected to take a field-arrested landing at NAS Fallon. To overcome controllability problems on the approach, the pilot had to provide significant left rudder while the aircraft commander was flying from the right seat. The aircrew's attention to detail, initiative, and resource management prevented a mishap.

Crew members in photo from left to right: Lt. Chan Barry, LCdr. Brian Groff, Lt. Corey Johnston, Ltjg. Jason Clendaniel, Ltjg. Jon Shepard.

The crew of Boomer 735, Lt. Ron Dowdell and Ens. E. P. Hadler, departed NAS Corpus Christi on a VMC day for a precision-aerobatic training mission. While flying a practice-emergency approach, they heard an unusually loud thump in the nosewheel well when the landing gear was lowered. Ens. Hadler told the instructor pilot, Lt. Dowdell, the landing-gear-position indicators displayed the nosewheel as unsafe.

Lt. Dowdell took the controls in the rear cockpit and entered the emergency-orbit delta pattern over Navy Corpus. The crew followed the NATOPS-pocket-checklist procedures for manually extending the landing gear, with negative results. Lt. Dowdell requested an in-flight inspection of his landing gear. Lt. Wayne Gunther joined his T-34 on Boomer 735 and confirmed the nosegear was down, but canted 45-degrees aft. Troubleshooting continued for 45 minutes, with Raytheon technicians and Lt. Ron Uhlig assisting over a maintenance frequency.

Out of options, Lt. Dowdell prepared to land knowing his nosegear would collapse on touchdown. On short final, he secured the engine and kept a nose-high attitude to slow the aircraft. He then gently lowered the nose to the deck before all lift was lost. The nosegear did collapse on landing, and the crew egressed without incident.

A coordinated effort averted a class A mishap. The engine and the reduction gearbox had no damage. Total damage to the T-34C was $16,000.

Lt. Dowdell, Ens. Hadler.

BRAVO Zulu

Back row from left: LCdr. Matt Pregmon, Lt. Zack Connelly, AW1 Jeff Hamilton, AW2 Brian Humphrey, Ltjg. Jason Compton. Front row from left: AE1 Kenny Mills, AW2 Cory Moore, Ltjg. Kristen Richards, PH2 Kim Smith, ATCS Ed Gambill

Combat aircrew (CAC) 11, with the Mad Foxes of VP-5, assisted in rescuing of a small fishing vessel off the east coast of Florida. While conducting combat-readiness training, CAC 11 received a distress call from a 28-foot, sport-fishing vessel. The boat rapidly was taking on water, and its three crewmen were trying to call the Coast Guard.

Lt. Zack Connelly, the patrol-plane commander, and LCdr. Matt Pregmon, the mission commander, responded to the call, talked with the skipper, and got their location. Lt. Connelly contacted the Coast Guard Station at Port Canaveral, told the dispatcher of the situation, and offered SAR assistance. With approval from Air Traffic Control, the crew headed 85 miles south at 300 knots to an area 25 miles east of St. Sebastian's Inlet.

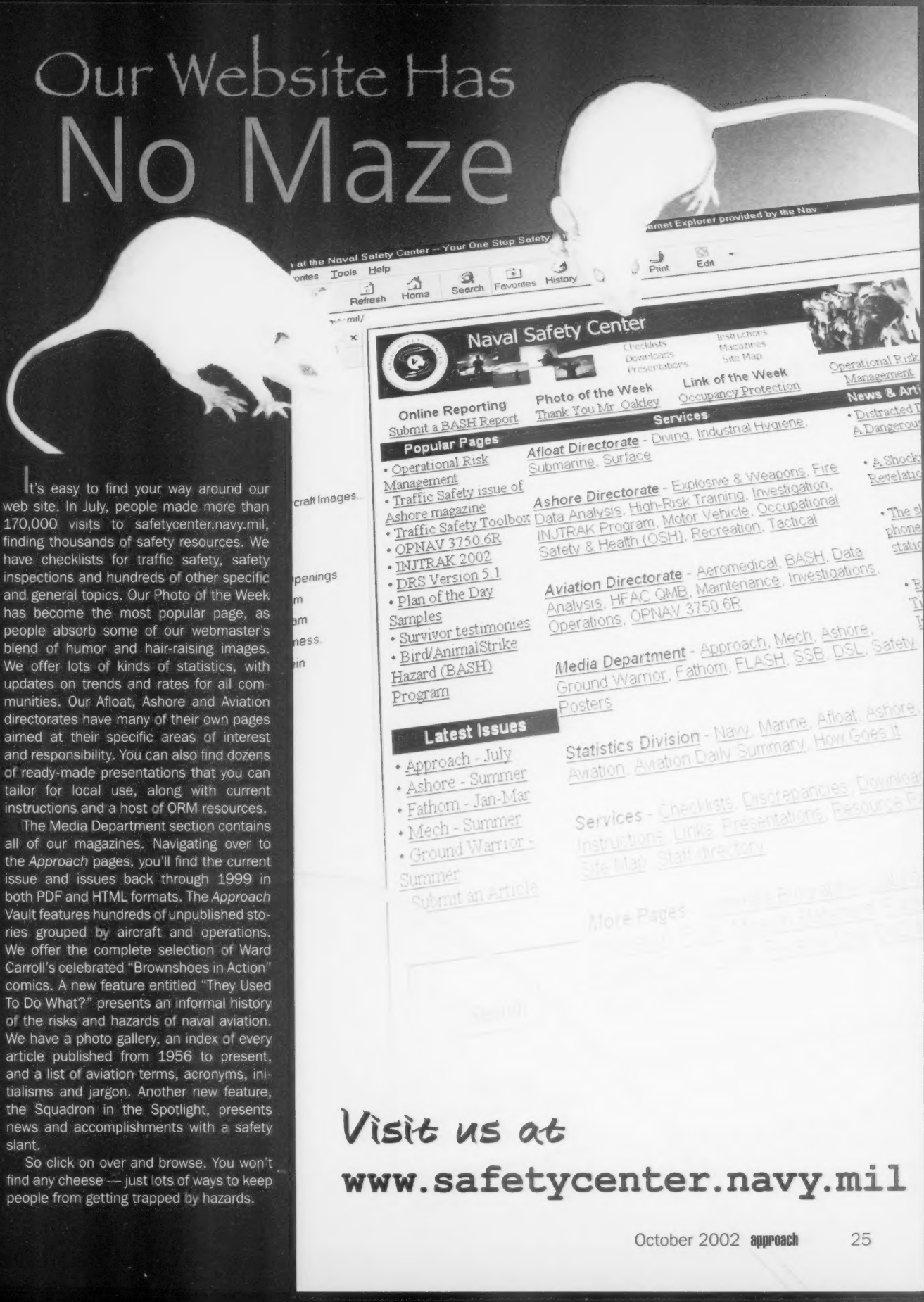
CAC 11 identified the troubled boat using their advanced-imaging, multi-spectral-system camera. The flight-station crew noticed a few small fishing craft within five miles of the boat. Ltjg. Kristen Richards, the pilot at the controls, descended to 300 feet and circled the boat several times, flashing landing lights to tell the skipper that help had arrived. After establishing communications and marking their coordinates, the crew did low-altitude flybys and flashed their lights to get the attention of nearby vessels.

The skipper of another sport fisher contacted CAC 11 on maritime frequency channel 16 and offered to assist. The P-3 crew returned to the distressed boat, circled overhead, and vectored the supporting craft to the distressed boat's position. While orbiting the sinking boat and talking with the Coast Guard, the P-3 crew learned the skipper of the assisting boat was retired Navy and had served in VP-6.

Several members of the assisting-boat crew boarded the sinking fisher and helped bail the rising water. Unable to find and contain the source of flooding, the skipper of the sinking boat moved his crew to the safety of the other boat. Ten minutes later, the boat capsized.

CAC 11 remained on-top and directed a Coast Guard cutter to the scene. As the cutter crew took control of the situation, CAC 11 returned to NAS Jacksonville with a completed training mission and SAR under their belts. "Way to go Navy!" was the last radio call received from the skipper of the assisting sport fisher as the P-3C left the site.

Our Website Has No Maze


Naval Safety Center
Online Reporting
Submit a BASH Report
Photo of the Week
Thank You Mr. Oakley
Link of the Week
Occupancy Protection
Popular Pages
Services
Latest Issues
Afloat Directorate - Diving, Industrial Hygiene, Submarine, Surface
Ashore Directorate - Explosive & Weapons, Fire, Data Analysis, High-Risk Training, Investigation, INJTRAK Program, Motor Vehicle, Occupational Safety & Health (OSH), Recreation, Tactical
Aviation Directorate - Aeromedical, BASH, Data Analysis, HFAC QMB, Maintenance, Investigations, Operations, OPNAV 3750.6R
Media Department - Approach, Mech, Ashore, Ground Warrior, Fathom, FLASH, SSB, DSL, Safety Posters
Statistics Division - Navy, Marine, Afloat, Ashore, Aviation, Aviation Daily Summary, How Goes It
Services - Checklists, Discrepancies, Downloads, Instructions, Links, Presentations, Resource Page, Site Map, Staff directory
More Pages
Approach - July
Ashore - Summer
Fathom - Jan-Mar
Mech - Summer
Ground Warrior - Summer
Submit an Article

It's easy to find your way around our web site. In July, people made more than 170,000 visits to safetycenter.navy.mil, finding thousands of safety resources. We have checklists for traffic safety, safety inspections and hundreds of other specific and general topics. Our Photo of the Week has become the most popular page, as people absorb some of our webmaster's blend of humor and hair-raising images. We offer lots of kinds of statistics, with updates on trends and rates for all communities. Our Afloat, Ashore and Aviation directorates have many of their own pages aimed at their specific areas of interest and responsibility. You can also find dozens of ready-made presentations that you can tailor for local use, along with current instructions and a host of ORM resources.

The Media Department section contains all of our magazines. Navigating over to the *Approach* pages, you'll find the current issue and issues back through 1999 in both PDF and HTML formats. The *Approach* Vault features hundreds of unpublished stories grouped by aircraft and operations. We offer the complete selection of Ward Carroll's celebrated "Brownshoes in Action" comics. A new feature entitled "They Used To Do What?" presents an informal history of the risks and hazards of naval aviation. We have a photo gallery, an index of every article published from 1956 to present, and a list of aviation terms, acronyms, initialisms and jargon. Another new feature, the Squadron in the Spotlight, presents news and accomplishments with a safety slant.

So click on over and browse. You won't find any cheese — just lots of ways to keep people from getting trapped by hazards.

Visit us at
www.safetycenter.navy.mil

Flight-Deck Fender Bender

By Ltjg. Paul Till

A beautiful afternoon in the Arabian Sea awaited me after an uneventful six-hour Operation Enduring Freedom mission over Afghanistan. I was halfway through my nugget cruise in a Hornet squadron, and operations had become routine: We flew the same missions every day. Routine ops made the flight-deck environment more dangerous than usual and led me into a potentially deadly situation.

I had just chalked up an OK 3-wire and cleared the landing area. Yellowshirts guided me toward the bow. I taxied around the starboard shuttle, then went aft and parked adjacent to a Hornet halfway down cat 1. The controlling yellowshirt signaled the blueshirts to install chocks and tie-down chains. I thought I was finished taxiing for the day; I was very mistaken.

After setting the parking brake and paddling off the nosewheel steering, I began my preshut-

THE PAPER AND
ORIGINAL PUBLICATI
QUALITY OF THE MI

down checks, safed my ejection seat, released my upper Koch fittings, and removed my oxygen mask. When I twisted left to secure the oxygen flow, I suddenly noticed the jet next to mine appeared to be moving, which I thought was peculiar. I quickly learned my jet, instead, was rolling forward. I immediately stomped on the brakes, and my left hand reached for the parking-brake handle. To my surprise, I found the handle disengaged.

The aircraft rolled nearly 20 feet from where I recognized the movement to where I reacted. Afterward, I reset the parking brake, looked over my left shoulder, and saw my left wing overlapped the right stab of the other jet. At first, it looked like the jets were not touching, but after I shut down and climbed out, I could see the jets were touching.

I had had a fender bender with the jet parked to my left. The leading edge of my left outboard pylon dented the trailing edge of the adjacent jet's right stabilator. My Hornet escaped unscathed, but the neighboring jet sustained enough damage to keep it off the flight schedule for over a month.

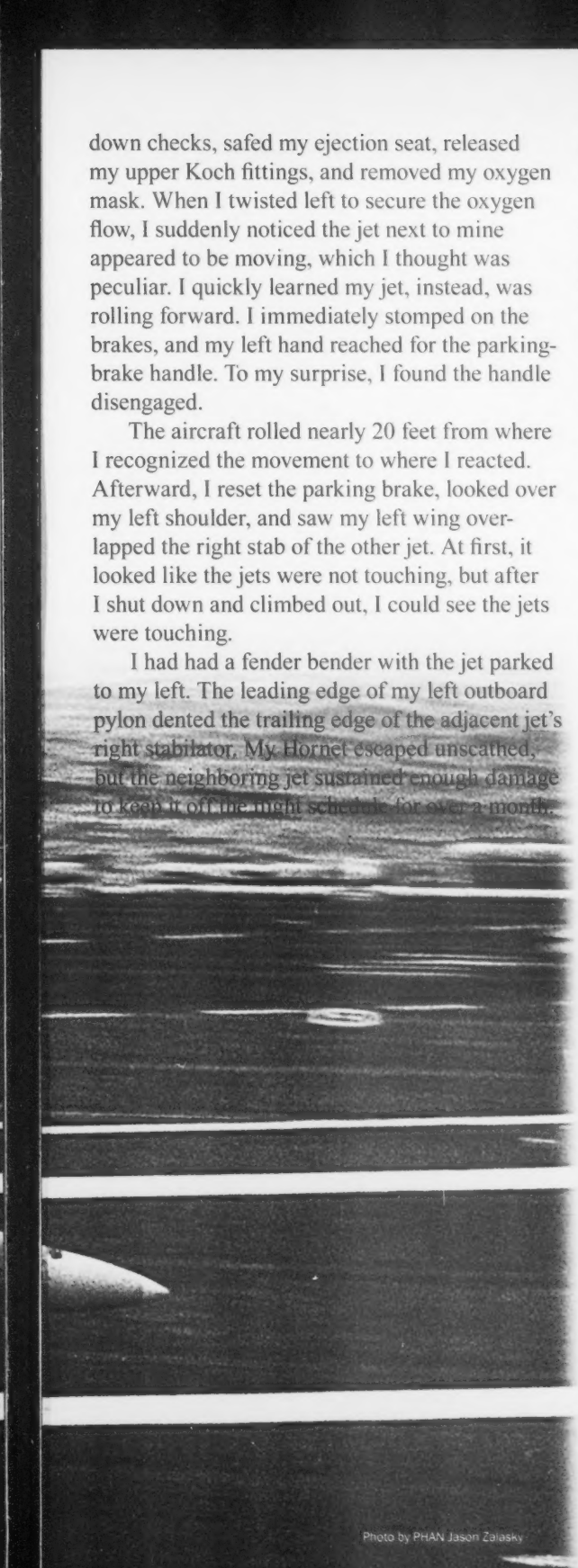


Photo by PHAN Jason Zalasky

Fortunately, the blueshirts under the aircraft avoided injury when the aircraft rolled ahead.

How did this happen? I placed too much confidence in the parking brake. Almost all Hornet pilots unknowingly have disengaged the parking brake at least once. The handle is positioned one-half inch from the pilot's left knee and easily can be disengaged by the pilot if he moves around in his seat. The day after my crunch, a squadron department head inadvertently disengaged his parking brake on the flight deck, and the aircraft began to roll. He stopped it before damaging anything.

When an aircraft isn't chocked and chained, a pilot's primary focus should be the positive control of aircraft movement. I never saw the yellowshirt director frantically wave his arms in front of my jet. Instead, my focus was on preshutdown checks inside the cockpit.

After spending seven hours sitting in the ejection seat, I was too eager to get unstrapped. FA-18 NATOPS states the following under carrier-based procedures: "The canopy should be down, oxygen mask on, and the ejection seat armed during taxi." Although I thought I was finished taxiing, I was not. I should have

I never saw the yellowshirt director frantically wave his arms in front of my jet.

remained armed and completely strapped into my seat until the aircraft was chocked and chained.

Finally, I got lax on the flight deck, one of the most dangerous work environments in the world. I allowed myself to become preoccupied with checklist items that could have waited.

Settling into a routine can cause you to lower your guard and stray from basic procedures. The focus of our briefs and missions were combat operations over Afghanistan, not the administrative issues we take for granted. Even in combat, the adage, "The flight isn't over until the paperwork is complete," still applies.

Ltjg. Till flies with VFA-146.

ID INK USED IN THE
ATION MAY AFFECT THE
MICROFORM EDITION.

Flight-Deck Fender Bender

By Ltjg. Paul Till

A beautiful afternoon in the Arabian Sea awaited me after an uneventful six-hour Operation Enduring Freedom mission over Afghanistan. I was halfway through my nugget cruise in a Hornet squadron, and operations had become routine: We flew the same missions every day. Routine ops made the flight-deck environment more dangerous than usual and led me into a potentially deadly situation.

I had just chalked up an OK 3-wire and cleared the landing area. Yellowshirts guided me toward the bow. I taxied around the starboard shuttle, then went aft and parked adjacent to a Hornet halfway down cat 1. The controlling yellowshirt signaled the blueshirts to install chocks and tie-down chains. I thought I was finished taxiing for the day; I was very mistaken.

After setting the parking brake and paddling off the nosewheel steering, I began my preshut-

THE PAPER AND
ORIGINAL PUBLICATI
QUALITY OF THE MI

down checks, safed my ejection seat, released my upper Koch fittings, and removed my oxygen mask. When I twisted left to secure the oxygen flow, I suddenly noticed the jet next to mine appeared to be moving, which I thought was peculiar. I quickly learned my jet, instead, was rolling forward. I immediately stomped on the brakes, and my left hand reached for the parking-brake handle. To my surprise, I found the handle disengaged.

The aircraft rolled nearly 20 feet from where I recognized the movement to where I reacted. Afterward, I reset the parking brake, looked over my left shoulder, and saw my left wing overlapped the right stab of the other jet. At first, it looked like the jets were not touching, but after I shut down and climbed out, I could see the jets were touching.

I had had a fender bender with the jet parked to my left. The leading edge of my left outboard pylon dented the trailing edge of the adjacent jet's right stabilator. My Hornet escaped unscathed, but the neighboring jet sustained enough damage to keep it off the flight schedule for over a month.

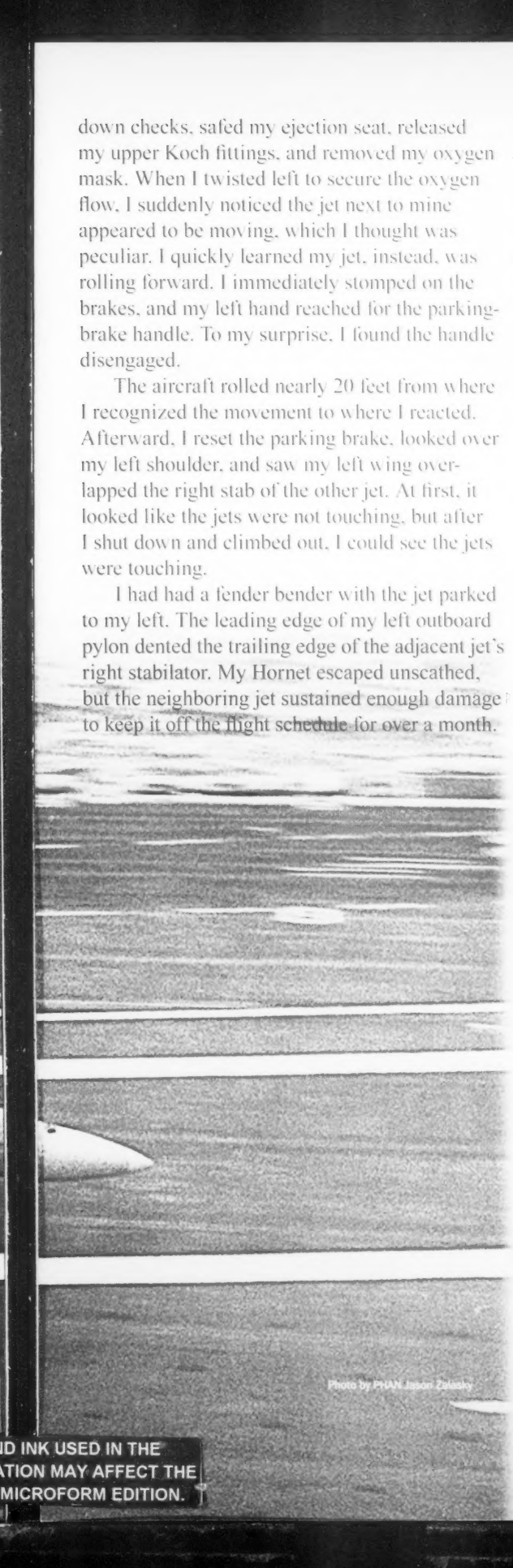


Photo by PHAN Jason Zalosky

Fortunately, the blueshirts under the aircraft avoided injury when the aircraft rolled ahead.

How did this happen? I placed too much confidence in the parking brake. Almost all Hornet pilots unknowingly have disengaged the parking brake at least once. The handle is positioned one-half inch from the pilot's left knee and easily can be disengaged by the pilot if he moves around in his seat. The day after my crunch, a squadron department head inadvertently disengaged his parking brake on the flight deck, and the aircraft began to roll. He stopped it before damaging anything.

When an aircraft isn't chocked and chained, a pilot's primary focus should be the positive control of aircraft movement. I never saw the yellowshirt director frantically wave his arms in front of my jet. Instead, my focus was on preshutdown checks inside the cockpit.

After spending seven hours sitting in the ejection seat, I was too eager to get unstrapped. FA-18 NATOPS states the following under carrier-based procedures: "The canopy should be down, oxygen mask on, and the ejection seat armed during taxi." Although I thought I was finished taxiing, I was not. I should have

I never saw the yellowshirt director frantically wave his arms in front of my jet.

remained armed and completely strapped into my seat until the aircraft was chocked and chained.

Finally, I got lax on the flight deck, one of the most dangerous work environments in the world. I allowed myself to become preoccupied with checklist items that could have waited.

Settling into a routine can cause you to lower your guard and stray from basic procedures. The focus of our briefs and missions were combat operations over Afghanistan, not the administrative issues we take for granted. Even in combat, the adage, "The flight isn't over until the paperwork is complete," still applies.

Ltjg. Tull flies with VFA-146.

ID INK USED IN THE
ATION MAY AFFECT THE
MICROFORM EDITION.

Stuck on a Shock Absorber

By Ltjg. Jeremy Vellon

Barely a month into my first sea tour, I was becoming a salty dog. I was confident the FRS training in San Diego had prepared me for every situation that could arise while flying the mighty H-46. I only had to master my ground job to become a well-rounded aviator.

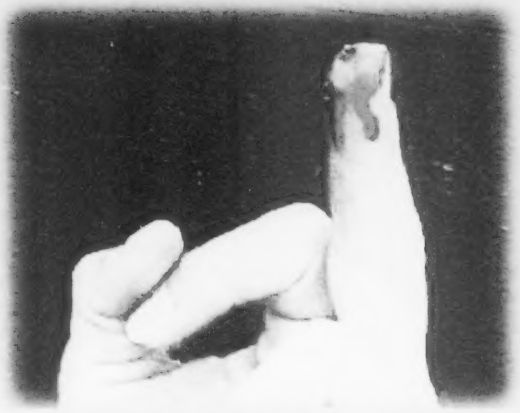
Even that job was coming along well. I was assigned to the operations department as schedules officer. The learning curve in ops was exponential because, within a week, I was writing flight schedules, tracking and maintaining pilot and aircrew flight qualifications, and seeing the big picture. I felt invincible.

One morning I was scheduled for a good deal: a practice-vertrep hop, I reviewed the procedures and emergencies, and completed the weight-and-balance form. I thought my preflight planning was complete.

The HAC said he'd like to meet at the aircraft at brief time, which allowed a spare half-hour to reflect on everything I had accomplished that day. I hung out in the ops office and worked on our squadron's Battle "E" submission. I even wrote a "trip ticket," full of information for a crew going on a ship hop that evening.

I stopped to ask myself if I had missed anything. I knew it was times like these when people get caught off guard and end up having to write a *Mech* or *Approach* article. I was sure I had done all the necessary planning. The only thing left was the preflight inspection, and I promised myself to do that as carefully as I had done the other planning.

I checked out my survival vest, helmet and nav bag, then walked to meet the crew at the bird. After climbing onto the stubwing and then the aft pylon, I went up to the aft rotor head to survey



all that was mine. The crisp November-morning air filled my lungs as I continued my preflight.

I reached across the rotor head to check the security of the spider assembly that is on the far rotor blade. The assembly protects the lead-lag shock absorber. A quick shake showed no excess play. As I let go to stand upright again, I felt a pinprick in my left middle finger. My hand now was stuck to the shock absorber. I must have voiced my surprise at this turn of events in a four-letter exclamation because my HAC, who was on the port stubwing, asked me what was up.

I was gloveless at the time and found an inch-long piece of excess, braided, safety wire that secured the oil-level sight glass on the shock absorber was stuck in my finger. The wire protruded out my fingertip. After a second of disbelief, I asked my crew chief for a wire cutter, and my HAC sent a second crewman inside for a first-aid kit. As he tells it, he ran into maintenance control asking for the kit. The chief wanted to know why I couldn't get it myself. The crewman replied, "He's attached to the aircraft!"

After a couple of careful tries, I cut the wire at its root by the sight glass, then marveled at the sight of braided wire sticking out my fingertip in two places. With a little help, I made it to solid ground without compounding the injury and placed gauze around the puncture. I showed the spectacle around the squadron for a few minutes before the duty driver took me to medical. There, I experienced the most unpleasant feeling of the day: a doctor yanking the wire out of my fingertip.

I learned several lessons that day, starting with the importance of wearing gloves for preflight. I also learned that no amount of preparation or competence can protect you from a moment of carelessness. When you fail to notice one thing slightly out of order, it can hurt you. I didn't miss any workdays or damage any equipment, but I was lucky. On the other hand, I missed out on that good-deal hop and showed I'm not invincible.

Ltjg. Vellon flies with HC-6.

Mishap-Free Milestones

VFA-147
11 years (52,000 hours)

VQ-1
15 years (93,000 hours)

VAW-112
29 years (61,000 hours)

VFA-146
17 years (71,900 hours)

VAQ-132
32 years (53,000 hours)

VPU-2
20 years (50,000 hours)

VS-33
7 years (25,000 hours)

HSL-51
11 years (70,000 hours)

VP-16
37 years (246,000 hours)

VAW-117
25 years (53,250 hours)

VP-26
40 years (289,600 hours)

VS-31
32 years (126,808 hours)

VAQ-130
21 years (36,000 hours)

The Last Tra

By Cdr. Rick Erickson, MSC

The flight started out simply enough: Ferry an FA-18 from point A north to point B south, to support a squadron detachment.

The launch routine was normal. Cruise altitude was FL430 to avoid the numerous seasonal thunderstorms. Around 1+15 into the flight, a series of cascading events caused the aircraft to rapidly descend. The pilot didn't try to eject prior to hitting the ground.

Although most of the aircraft wreckage was recovered at the crash site, the aircraft-mishap board (AMB) had little to go on. The aircraft had hit the ground at high speed, at a steep angle, with the nose down. Extreme collision forces destroyed the aircraft. The AMB pieced together the limited available evidence and determined hypoxia most likely was the culprit.

Radio transmissions from the mishap pilot to ATC initially had been routine. However, seven minutes after check-in with the last sector ATC, a mostly unintelligible radio call was made to a center controller. The aircraft continued at altitude for two minutes and then descended rapidly. The crash occurred about one minute after initial descent.

The AMB focused on the radio transmissions between the pilot and ATC. Of particular interest to the board was the last transmission before the crash.

Key points became evident as the AMB scrutinized communications:

- The response time for the pilot to acknowledge ATC was significantly longer than previous responses.
- The pilot's voice sounded sluggish and labored, and it had a more urgent quality, including an uncharacteristic silent period. The extended interval between the time he keyed the microphone button and started talking indicated

Scenes of the crash site where excavation of the aircraft reached depths of 25 to 30 feet.

nsmission

a lack of coordination. When the controller again queried the pilot, the pilot did not respond.

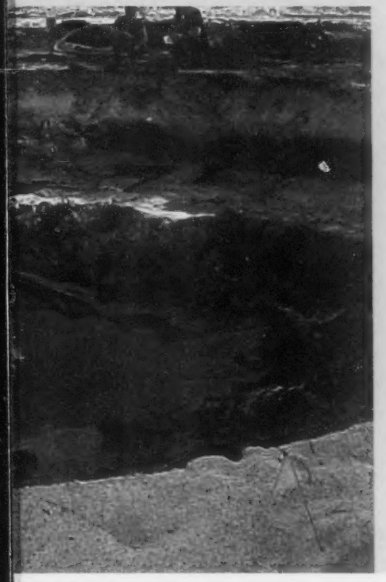
You probably have surmised that hypoxia didn't occur spontaneously. Two scenarios were possible. A mechanical problem developed in the oxygen system of the aircraft and exposed the pilot to rarefied atmosphere, or his oxygen mask failed to function as advertised. Whatever the cause, the end result was a physiological event that incapacitated the pilot.

If you recall your initial or quadrennial update in the low-pressure chamber at the Aviation Survival Training Center, you probably recognize some of the symptoms discussed in the previous scenario. Classic hypoxia symptoms include a slow response to a question, labored breathing, and lack of coordination. This experienced pilot, who undoubtedly went through the low-pressure chamber more than once, was overcome by the insidious onset of hypoxia.

Let's review the different types of hypoxia. In general, hypoxia is the lack of oxygen to the brain. Hypoxia exists in four different types: hypoxic, anemic, stagnant, and histotoxic. No matter which one occurs, the outcome always is the same: reduced oxygen to the brain.

...seven minutes after check-in...a mostly unintelligible radio call was made to a center controller.

Hypoxic hypoxia is the most common type found in aviation. It is the reduced ability of red blood cells to carry oxygen. The most familiar cause of hypoxic hypoxia is the low oxygen



Debris is placed in a sifter to separate and identify parts.

content of air at high altitude. Symptoms appear when you are exposed to an altitude that requires oxygen, but you are not wearing an oxygen mask, or your oxygen mask or oxygen system isn't working.

Anemic hypoxia involves a reduction of functioning, circulating hemoglobin. This type of hypoxia appears in persons suffering from anemia or blood loss. Anemic hypoxia also can be caused by carbon monoxide, which configures the hemoglobin so it carries less oxygen. The body is effectively put at altitude before leaving the ground. Combining the effects of smoking with cockpit altitude puts your body at a higher altitude than the pressurized cockpit.

Stagnant hypoxia is the result of a reduction in the total volume of circulating blood because of shock, or the pooling of blood in the extremities during rapid acceleration. This blood pooling can cause visual problems, including loss of peripheral vision and the ability to focus. Blood pooling can lead to blackout or loss of vision and unconsciousness.

The fourth type of hypoxia is histotoxic hypoxia. It results from the poisoning of the tissue enzymes that render tissue cells unable to use oxygen. For example, taking two aspirins six hours before flying can destroy 30 to 60 percent of one's tolerance to hypoxia.

Lower altitudes produce hypoxia symptoms more slowly, while higher altitudes expedite the process. The sure cure for alleviating hypoxia symptoms is to breathe 100 percent oxygen and to descend below 10,000 feet.

How big a problem is hypoxia? A data-run from the Naval Safety Center for FY91 through FY01 found 28 cases. The most recent Class A hypoxia mishap, discussed earlier, is the only one in which hypoxia was determined to be the cause. Twenty of these events involved material-equipment failures that included explosive decompression, pressurization-system malfunctions, OBOGS malfunctions, and damaged or failed personal-protective equipment (oxygen mask, hoses, regulators).

In FY02, several hypoxia hazreps identified concerns about the OBOGS systems.

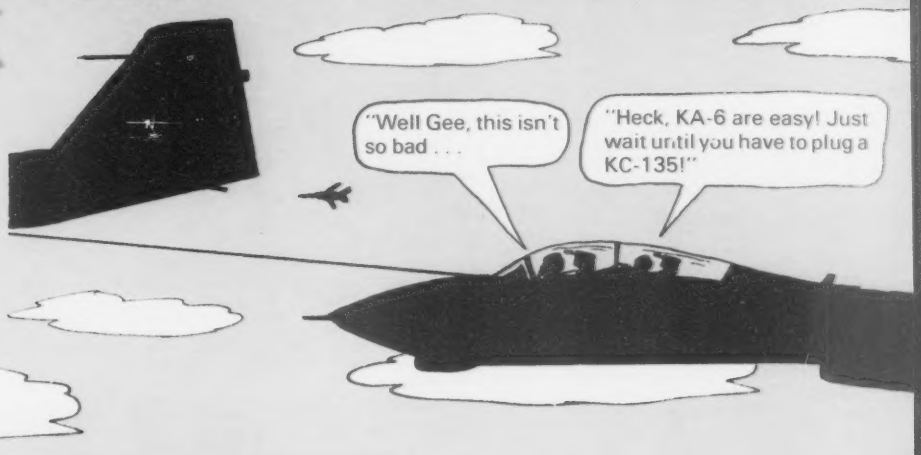
As long as airplanes continue to fly at altitude, the potential for hypoxia exists. No new lessons have been learned, just old ones rehashed. Be familiar with your aviation-life-support equipment, and conduct proper preflight checks. Know the symptoms of hypoxia and what precautions to take.

Cdr. Erickson is the staff physiologist at the Naval Safety Center.

Classic BROWNSHOES IN ACTION COMIX

"THE KIND REAL AVIATORS LIKE"

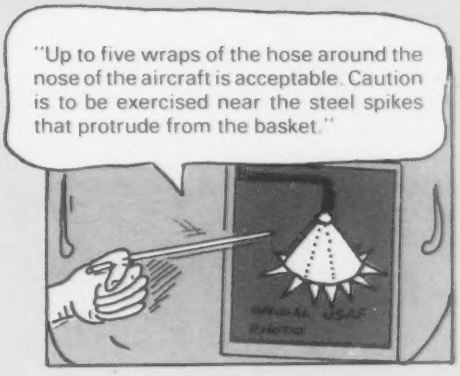
It was in the tanker pattern at the RAG that young "Butch" Fusco heard of the horrors . . .



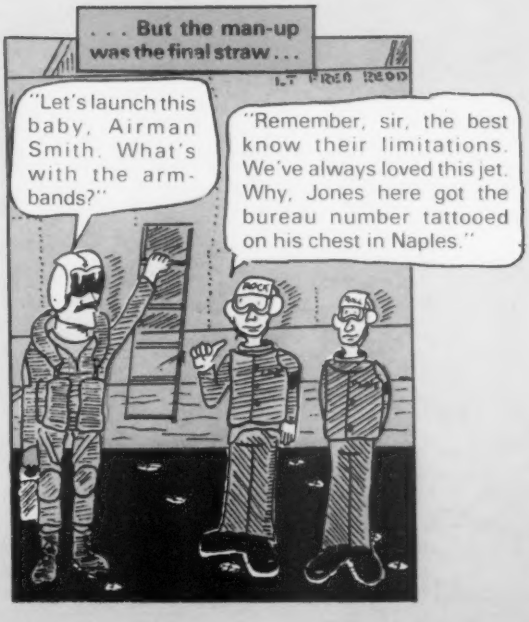
The words echoed in his helmet like the sweepers call on the 1MC . . .

Once Butch joined the fleet, his squadron mates did little to ease his apprehension . . .

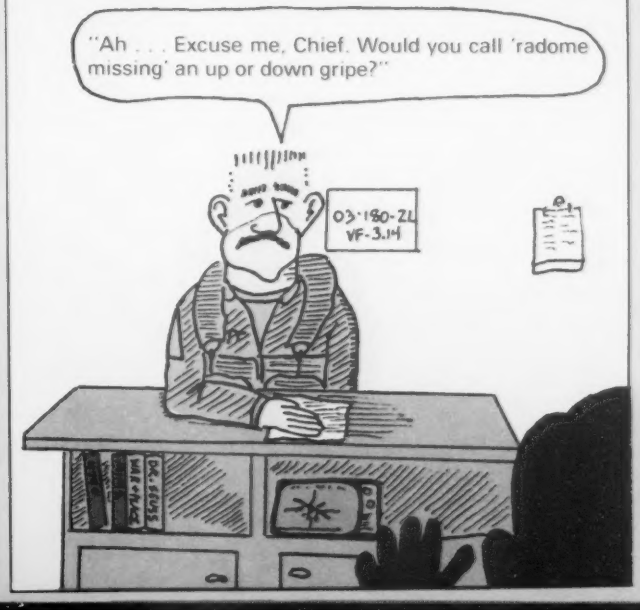
The civic brief made it sound so easy . . .


"Up to five wraps of the hose around the nose of the aircraft is acceptable. Caution is to be exercised near the steel spikes that protrude from the basket."

. . . But the man-up was the final straw . . .


LT FRED REED
"Let's launch this baby, Airman Smith. What's with the arm-bands?"
"Remember, sir, the best know their limitations. We've always loved this jet. Why, Jones here got the bureau number tattooed on his chest in Naples."

However, in the end the evolution would be remembered by Butch as "No big deal" . . .



Ready Room Gouge

Photo by Matthew J. Thomas

INSTRUMENT FLYING IS WHEN
YOUR MIND GETS A GRIP ON THE FACT
THAT THERE IS VISION BEYOND SIGHT.

NAVAL SAFETY CENTER

www.safetycenter.navy.mil